MULTIMEDIA UNIVERSITY*

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2022/2023 (TERM ID 2220)

FBDA2024 – DATA ANALYTICS FOR BUSINESSES

(All sections/Groups)

13 JULY 2023
9:00 a.m. - 11:00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 3 pages (excluding cover page) with 2 sections.
2. Attempt **ALL** questions in Section A and Section B. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

SECTION A: Case Study (40 Marks)

Netflix Predictive Analytics: Journey to 220 Million+ subscribers

Netflix uses analytics to make predictions based on the user's watch history, search history, demographics, ratings, and preferences. These predictions show with 80% accuracy what the user might be interested in seeing next. Based on the subscriber's viewing preferences, Netflix is able to predict what customers are likely to watch next! Examples are Personalized Video Ranking, Trending Now Ranker, Continue Watching Ranker, etc.

Based on the shows or movies that are performing really well and are picking up with the audience, Netflix uses a projection model to select which projects to invest and work on. Predictive analytics allows Netflix to anticipate the needs of customers to forecast customer needs based on purchase history, search history, interests, demography, and more. This is what makes Netflix so successful.

Netflix uses data analytics to optimize the ground logistics for the shoots of the shows or movies. Just like projecting the shows that would turn out to be successful, analytics help them project the costs of filming in one location versus another location. Even the post-production activities are analysed using data, and performed with best productivity. For the show - House of Cards, Netflix created more than 10 versions for the show's trailer. If an audience watched a lot of shows centred around women, he or she will be shown the trailer that's focussed on female characters, and so on.

Netflix uses the Aesthetics Visuals Analysis that checks the video and identifies the frames that can be used as artworks. Predictive analytics is marvellous at identifying abnormal and risky behaviour. Leaders in Netflix uses analytics to predict when a once-promoter may turn into a detractor. Once the abnormal behaviour is detected, analytics can alert the customer service leaders to pay extra attention to those customers. It enables businesses to take a proactive approach to reduce churn and customer attrition.

Predictive analytics significantly improve Netflix's internal operations efficiency to enhance the customer experience. The smoother the operation, the faster the service. Having efficient internal operations help Netflix ensure that the customer receives quality service without any fuss. By introducing a predictive analytics model, Netflix further boost employee productivity to give the company an edge over competitors.

Predictive analytics allows Netflix to look into the future with more accurate and reliable insights. At a macro-level, predictive analytics provides a lens into consumer behaviour and purchase patterns, but businesses use it at a micro-level to enhance daily customer satisfaction.

Source: Engati. (2023). *Netflix Predictive Analytics: Journey to 220Mn+ subscribers.* Retrieved from: https://www.engati.com/blog/predictive-analytics

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QUESTION 1

Assuming you are a decision maker in Netflix, propose **FIVE (5)** strategies for the organization to sustain competitive advantage using predictive analytics. (10 marks)

QUESTION 2

Outline **FIVE (5)** possible mistakes of predictive analytics that may lead to inaccurate and untimely business decisions in Netflix. (10 marks)

QUESTION 3

Using existing and relevant data obtained from the organization, Netflix builds models to discover patterns. Provide examples to differentiate **FOUR (4)** types of data patterns that could be discovered by Netflix. (10 marks)

QUESTION 4

Suggest **FIVE (5)** ways for Netflix to extracting useful information and knowledge from large amounts of unstructured data sources. (10 marks)

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SECTION B: Structured Questions (60 Marks)

QUESTION 1

Distinguish **FIVE (5)** most prominent traffic sources in data analytics. (15 marks)

QUESTION 2

Using online analytical processing (OLAP), an analyst can navigate for a particular subset of the data by changing the data's orientations and defining analytical calculations. Illustrate **FIVE (5)** essential OLAP operations by using examples. (15 marks)

QUESTION 3

Identify **FIVE (5)** most effective behavioural analytics measure to track customer engagement on a digital business. (15 marks)

QUESTION 4

Prepare a 100 words social media analytics report for Organization K based on the following results. In your report, evaluate the most influential node in the social media, network linkage, the node that transmits and receives the most within the social media.

Node	Indegree	Outdegree	Eccentricity	Betweenness	Influence	Information Centrality
1	1	4	2	2.50	0.33	2.33
2	2	3	2	2.83	0.51	2.02
3	1	1	3	2.30	0.56	1.43
4	3	5	4	4.72	0.63	2.57
5	2	2	2	0.00	0.38	1.59

(15 marks)

(Total: 100 marks)

End of Paper